

DENVER PC BOARDWATCH

NEWSLETTER FOR DENVER AREA ELECTRONIC BULLETIN BOARD SYSTEMS

AREA CODE 303

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BITS

MULTIMATE UPDATE: Multimate International, an Ashton-Tate subsidiary, announced an update to its popular Multimate Advantage word processing program on April 14. The new program, titled Multimate Advantage II, is priced at \$565. The upgrade features pull-down menus similar to its stablemate, the dBase III+ database program. The program also provides increased laser printer support as well as enhanced UNDO functions. Users can choose between the familiar Wang style page-oriented format or a new document oriented format similar to that used by Word Perfect or Wordstar. Merge data can be imported directly from dBase III+. The program is available in either 5 1/4 inch or 3 1/2 inch disk formats. Multimate International Corp. 52 Oakland Avenue, East Hartford, CT 06108 (203)522-2116.

To contact other Multimate users, obtain answers to technical questions, and even download the latest printer drivers, contact the MULTIMATE BBS at (203)289-4906.

QMODEM SST 3.0: The Forbin Project Inc. unveiled the latest release of its popular QMODEM communications program on April 18. The new upgrade allows users to easily add additional external file transfer protocol programs to the normal upload/download menu. The macro function has been expanded allowing script files to be tied to individual function keys. This allows "one touch" execution of scripts. The

new release also features enhanced dial and file transfer windows displaying more information. QMODEM is distributed under the Shareware concept allowing users to review the program at no charge with a \$30 fee requested if they find it useful. The version 3.0 upgrade can be downloaded from the Forbin Projects support BBS at (612)824-8167. To obtain the program on disk, send \$10 to Forbin Project Inc. 4945 Colfax Ave. South, Minneapolis, MN 55409.

Alternatively, the program is available for download locally from Control Systems II BBS at (303)841-6065.

DOS 3.3 UPDATE: IBM announced a new version of its Disk Operating System (DOS) on April 2. Version 3.3 is still single-tasking but offers four communications ports and eliminates the 32 Megabyte hard disk size limitation. Additional networking features are provided for Local Area Networks (LANs) along with new file handling commands such as FASTOPEN, CALL, and APPEND. The new DOS is available immediately. Its a bit pricey at \$125 with upgrade from previous DOS versions at \$75.

COLORADO CAREERS: With the recent economic upheaval in Colorado, thousands of professionals are contemplating career changes or seeking employment within their own career field. Colorado Career Information Systems (COSIS) provides an on-line database of current occupational and educational information. Although

the service is targeted toward Colorado high schools, more individuals are expressing an interest in the service. The database lists over 300 occupations and 1000 specialties providing info on educational requirements; minimum, average, and maximum salary ranges; long and short term employment prospects; and companies employing a particular job skill. Additionally, the database provides profiles of thousands of Colorado employers and details their hiring plans for the coming year. The database also describes information on admissions requirements, costs, and areas of study for all vo-tech, two-year and four-year public schools in Colorado. Cost is about \$25 per hour with a one hour minimum. For more information, contact COSIS 830 South Lincoln, Longmont, CO 80501. Telephone (303)666-9107.

TOLL FREE DIRECTORY: A directory listing thousands of businesses with toll-free 800 telephone numbers is available for \$9.95. Contact (800)426-8686 ext. 222 for details.

SUPERSPEED XT: Datavue Technical Systems has developed an IBM PC XT compatible computer. Is another clone news? It is if it runs at 150 MHz. This corresponds to a Norton Utilities index of 72 indicating the Datavue Advanced Personal Computer runs 72 times faster than a 4.77 MHz PC or 15 times faster than an AT model. Priced at \$12000+ they are targeting the CAD/CAM market - and very wealthy BBS operators! Datavue Technical Systems 4355 International Boulevard, Norcross GA 30093 (404)564-5780.

19200 BAUD MODEM: Microcom has announced a 19200 baud modem card

for the IBM PC. The unit is Hayes compatible. Microcom 1400 Providence Highway, Norwood MA 02062. (800)822 8224.

ASTRONOMICAL SOFTWARE: Andrew Fraknoi of the Astronomical Society of the Pacific (ASP), and John Mosley of the Griffith Observatory in Griffith Park CA, have compiled an eight-page directory of nearly one hundred commercially available astronomical programs. The programs range from simple calculations to full blown space travel simulations. Reviews of each program describe purpose, cost, required hardware, and source. Titles are listed for Apple, Atari, Commodore, TRS, Macintosh, and IBM computers. Send \$2.00 to ASP Computer List, 1290 24th Avenue, San Francisco, CA 94122.

FREE BUSINESS YELLOW PAGES:

Last month we noted the American Business List Yellow Page Database. Useful - but expensive at \$1 per minute. Well let those fingers keep on walking. Electronic Business Yellow Pages of Niagara Falls New York offers a nationwide Yellow Pages database containing 14 million entries for FREE. And the service includes a Health and Medical Directory and a Canadian Classified Directory as well. To access this free database service, set your comm program for 300 baud and VT100 emulation. Dial Telenet locally at (303)337-6060. At the @ prompt, enter "C[space]0302036700126" and press [ENTER]. At the SERVICE ID= prompt enter "C" and press [ENTER]. You will be greeted by a slow, but useful, database. And the price is right. Electronic Business Yellow Pages. 719 Main Street, Niagara Falls, NY 14302. Voice phone - (800)387-9782.

LOCAL SERVICE

NEW FIDO BBS: This issue brings us two new Fidonet bulletin board systems (BBS) operating limited hours. Steve Carnes introduces **THIS END UP FIDO 104/30** available at (303)430-1585 from 10 pm to 10 am. Steve offers message areas for dBase and Astronomy. Joining him is Kris White with **NIGHTLINE FIDO 104/31** available at (303)659-1897 from 9 pm to 3 am. Both of these new sysops express hopes of going to 24 hour operation soon. Two other existing boards have joined the Fidonet system. Adam Hudson's **MILE HIGH TURBO BOARD** is now net 104/node 24 at (303)423-3114. **ETA DENVER** has joined the system as 104/32 at (303)750-5042.

Missing In Action: We've been unable to raise a response from **GEORGE NET FIDO (303)322-4779**.

INSIGHT: David Killian brings us a new BBS with **INSIGHT** operating from (303)573-2071 during the hours of 5 pm to 7 am. **Insight** features on-line games.

KINGS MARKET BOOKSHOP: Looking for something a bit unusual? **Kings Market Bookshop BBS (303)665-6091** caters to those with a literary bent. Sections covering books and items of interest to writers comprise the main theme of this BBS but there are some other interesting items as well. The **ONLY** local **TIMEX/SINCLAIR** sub-board we're aware of operates with some excellent technical tips, **TIMEX/SINCLAIR** news, and fairly heavy national traffic.

SPACE NETWORK: Interested in our nations' space program? So is the Mars Institute of the Planetary Society as well as the Boulder Center for Science and Policy. They are talking

seriously about a manned colony on Mars. And they are talking on an excellent IBM bulletin board system at (303)494-8446. The board features an incredible wealth of information concerning manned space flight, including a national list of BBS devoted to space topics. Voluminous information on other groups include the NASA Ames Research Center, American Astronautical Society, World Space Foundation, International Planetary Society, Space Studies Institute, Mars Underground Newsletter, and the National Space Society Space Hotline. The Space Network BBS is a member of a telecommunications network of BBS across the country termed **STAR-NET**. This group sports the largest public domain library of astronomical software in the world. Among the overwhelming amount of space exploration information available from this board was a mammoth Summary of National Commission on Space report to President Reagan and the Congress by the Space Studies Institute. If you have the slightest interest in astronomy and particularly in our national space program, log on to this board. We expect this BBS will enjoy heavy national attention soon.

UNKNOWN TBBS: Henry Birdseye operates one of the oldest (earliest on-line) BBS systems on the front range. Mr. Birdseye also publishes a list of BBS in the Denver area. His latest was updated on April 17 and contains 159 boards. It's available for download electronically from the **Unknown TBBS** at (303)988-8155.

CONTROL SYSTEMS II: In addition to providing a wealth of download software, **Control Systems II BBS** at (303)841-6065 sports the Mustang Reporting Software option. This

utility provides an interesting statistical analysis of users. With recently increased traffic, sysop Don Stone of Parker CO reports an average 26 callers per day. Users with 1200 baud modems make up 96% of all callers with 300 baud users making up the remainder. The 2400 baud models still haven't caught on apparently. The statistical package also tells us that Friday and Wednesday are usually the busiest day of the week and 5 pm and 9 pm are about on par as the busiest hours. Having a problem logging on? Try it about 3 am - doesn't seem to be a problem then. The board has recently embarked on a group Turbo Pascal programming project. User's have also been busy comparing notes on different shareware communications packages and the board provides the latest versions of QModem, Telix, GT Powercomm, and ProComm. Jim Davis recently logged on from Houston Texas to lambast Denver PC Boardwatch for the April introduction of GT Powercomm version 12.10. Mr. Davis authored some of the utilities for GT Powercomm and he was a bit miffed over some of the program shortcomings we noted in the April issue. We'll have an in-depth review of this program in a future issue. Keep reading Jim.

LONG DISTANCE

JOBS UPDATE: Last month we reported several BBS providing on-line lists of available high-tech employment opportunities. This month, we add the TechSource, Inc. CAREER BULLETIN BOARD at (513)271-7703. Set communications parameters to either 300 or 1200 baud, 7 data bits, 2 stop bits, and even or no parity. This BBS lists over 20

different high technology job categories with a multitude of openings around the country. Such companies as Sverdrup, General Electric, General Dynamics, Aerojet, Emerson Electric, Martin Marietta, and IBM are represented. Upload resumes accepted. TechSource, Inc. sponsored Job Fair schedules are listed as well. TechSource, Inc. 5710 Wooster Pike, Suite 304, Cincinnati, OH 45227

The list below recaps other career development BBS noted in previous issues.

<u>Company</u>	<u>Number</u>	<u>Password</u>
EDP Joblist	(704)554-1102	none
BPI Adline	(612)941-3957	BPI
Northrop	(213)938-5532	none
LTV	(612)941-5723	JOBLINK
Sperry	(617)275-4112	SPERRY

Note that Northrop uses 7 data bits, 2 stop bits, and no parity. The other boards all use standard 8 data bits, 1 stop bit, no parity parameters.

NAVAL OBSERVATORY TIME: In our March issue we noted the US Naval Observatory Time Service provided Universal and Eastern Standard time with a tone each five seconds at (900)410-TIME. A charge of \$0.50 for the first minute seemed a reasonable price to pay to set your system clock in sync with the US Master Clock.

Since then we find there is a US Naval Observatory BBS at (202)653-1079. The board operates 24 hours at 300 or 1200 baud. It requires comm settings of 7 data bits, 2 stop bits and Even parity. It provides some fascinating, if strange, services at no charge.

All commands on the board must be preceded with the @ symbol. For instance @TIM results in a

statement of time keyed to a transmitted asterisk in the format "1987 120 4 28 58 150". This gives you the year (1987) day of year (120), universal coordinated time hour (4), minute (28), second (58) and milliseconds (150).

The @DAT command renders slightly different but related info such as the number 120.186847 corresponding to the number of days since the first of the year expressed in a fraction.

A final command we found interesting was the @SRI command. This function provides the sunrise and sunset times for a particular date, latitude, longitude, and elevation. Sunrise/sunset are defined as the time when the sun is 6 degrees below the horizon. This BBS hosted a wealth of other info concerning time, earth wobble, stars, and planetary motion.

TIME OF DAY FOR DIGITAL

CLOCKS: Finally, on the subject of time: The US Naval Observatory maintains a Time-of-Day (TOD) service for digital clocks at (202)653-0351. This number is not a BBS but a time service that repetitively emits a character string containing the exact time. A sample string would appear as "46915 120 041709 UTC" followed by a carriage return/line feed, an asterisk, and another carriage return/line feed.

The number 46915 contains the Modified Julian Date (MJD) calculated by subtracting the constant 2,400,000.5 from the astronomical Julian Date (number of days since noon, January 1, 4713 B.C.). The 120 represents the day of the year and 041709 is hour 4, minute 17, second 9. The UTC is an acronym for Universal Time Coordinated (Greenwich Mean Time). This is the time at meridian zero in Greenwich

England. Denver (Mountain Zone) lags this time by 7 hours (6 hours during daylight saving time).

The asterisk can be used to determine the time delay over the telephone lines in milliseconds. This delay can vary from 20 to 300 milliseconds depending on whether the call is routed over land lines or via satellite.

The BASIC language program on the following page automatically dials the US Naval Observatory (USNO) time service, downloads the time string, and updates the DOS clock to the correct minute and second without changing local date or hours. An IBM PC compatible computer and 1200 baud Hayes compatible modem are required.

Note that the program dials a long distance telephone call to Washington D.C. (albeit briefly). Further, the program updates the DOS TIME\$ only. The time is lost when the system is shut down. Hardware clock calendars vary widely in the I/O ports used etc. Because of this, the program does not attempt to update the hardware clock in your system. Most clock calendars come equipped with software to set the date and time.

OMNITEL LINE NOISE: Are you encountering line noise problems with your Omnitel, Leading Edge, PC Limited, Amazing Things, Basic Time, or Qubie modem? All these models are manufactured by Omnitel. PC Magazine reports that this modem attempts to equalize (adjust) to the line level before the host modem on the other end of the line supplies a carrier. The result is a signal degradation of as much as 6 dB.

The cure? Add 4 or 5 commas to your dial string (ATDT 555 1212,,,,,). This causes a brief delay for each comma allowing enough time for the other machine

BASIC PROGRAM
TO SYNC DOS CLOCK MINUTES AND SECONDS
TO US NAVAL OBSERVATORY MASTER CLOCK IN WASHINGTON DC4

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100 REM PROGRAM TO UPDATE DOS CLOCK MINUTE AND SECOND FROM US NAVAL
110 REM OBSERVATORY MASTER CLOCK. COPYRIGHT 1987 - JACK RICKARD

200 PRINT "CURRENT DOS TIME = ";TIME$
210 INPUT "ENTER LOCAL HOURS (00-23): ";TEMP$
220 PRINT "FETCHING MINUTES AND SECONDS FROM WASHINGTON DC..."
230 GOSUB 500: REM COMMUNICATIONS SUBROUTINE
240 PRINT "US NAVAL OBSERVATORY UNIVERSAL COORDINATED TIME = ";USNO$
250 PRINT "UPDATED DOS LOCAL TIME = ";TIME$
260 END

500 REM COMMUNICATIONS SUBROUTINE
510 OPEN "COM1:1200,E,7,2" AS #1
520 PRINT #1, "ATE0Q0X1V1S7=60 ATDT12026530351"
530 WHILE LEFT$(USNO$,1) < > "4"
540 INPUT #1, USNO$
550 WEND
560 USNO$=MID$(USNO$,11,2)+":"+MID$(USNO$,13,2)+":"+MID$(USNO$,15,2)
570 TIME$ = TEMP$ + MID$(USNO$,3,6)
580 PRINT #1, "ATH"
590 RETURN
```

to come on line with a carrier before equalization begins...and greatly improving your modems performance.

TELEX 2.12

- Review by Alan Applegate -

Earlier this year, Canadian Colin Sampaleanu and his company PTEL released version 2.12 of Telex, a shareware communications program. Since that time, Telex has found itself at the center of discussion on bulletin boards across the country. Even an Echomail area on Fidonet has been devoted to Telex support.

Telex really has very few features that cannot easily be found elsewhere. One of the best selling points, however, is the fact that Telex is FAST in most areas of its operation. In addition, a wide variety of file transfer protocols keep toy

addicts busy playing.

The file transfers with Telex are generally well thought out, and well implemented. Complete transfer status information is shown on-screen, and using "fat-trimmed" programming techniques, extraneous time is shaved off - yielding improved transfer speed. The author claims that faster transfer speeds cannot be obtained from any source.

In addition, when downloading with a non-batch transfer method, Telex searches recently received text and extracts a file name, offering it for your approval. This feature has always worked well for me, saving the time of finding and typing in the file name manually. Needless to say, batch transfer methods (i.e., SEALink, Telink) send the exact file name automatically.

Telex uses several batch (multi-file) transfer protocols, such as Modem7, Telink, SEALink

and Ymodem Batch. These all seem to work fine, with the exception of SEALink, which either locks-up or aborts when excessive line noise is present. When SEALink works, it works well.

Using a "sliding window" variant of Xmodem, SEALink is 15 to 25 percent faster than regular Xmodem, according to the Telix documentation. SEALink is specifically intended to cope with the delays introduced with long distance, satellite-linked file transfers (i.e. PC Pursuit), reducing long distance costs.

Although I generally do not use script files due to the potential for unexpected difficulties, Telix' implementation of a scripting language is far more complete than I have seen with some programs. Operation is smooth, allowing automated operation of on-line tasks in a wide range of circumstances. The author reports via Fidonet's Telix Echomail area that the next version of Telix will include an expanded script language he claims will be powerful enough to write and run a small BBS.

One of the most impressive features of Telix is the availability of a large scroll-back buffer. Several screen-pages of information are at your fingertips, making it easy to look at text that has long since scrolled off-screen. Access to this buffer is simple and rapid, making it easy to respond to your E-Mail point-by-point.

The dialing directory was disappointing after using the latest version of Qmodem (SST V3.0). Spartan would be a good word to describe the directory ...just the basics are there. A "Last On" feature, as in Qmodem, as well as the ability to associate a password with each entry, would be welcome.

The help screen, a HOME key away, contains a useful status panel in addition to the expected key-press menu. Personally, I have never been a fan of "status lines." Telix has most usual status line information tucked in the help screen instead. Although I hesitate to continue referring to "vaporware," Mr. Sampaleanu reports that an optional status line will probably be incorporated into the next release, leaving the user to decide whether a status line can be of help.

The documentation is a "plus" with Telix. Clear and concise, it explains the features of Telix without adding a lot of useless paper-consuming filler, as I have found with some shareware programs. We all know the frustration of tying-up a printer for lengthy periods with voluminous documentation.

I have rarely, if ever, come across a regular need for terminal emulations. Many people, however, particularly those who use a college mainframe, have expressed a desire for emulations within Telix. The current version of Telix does not support any emulations, but again, it has been reported that some popular emulations will be incorporated in the next release.

In general, I find Telix to be a quick, easy and fun to use communications program. There seem to be a few bugs to be worked out, not the least of which are with the transfer protocols. The bugs I have found, however, are only slightly annoying at worst, and in my opinion are not likely to show themselves to the casual user.

It would appear that Telix has been thoughtfully written. Rather than leave certain functions of memory allocation

user-programmable (most notably scroll-back buffer length), Telix automatically uses memory in an optimized fashion. Buffers are allocated for scroll-back, upload/download and other functions automatically, streamlining these operations.

Telix offers features that are likely to suit most everyone except "power-users." It's my program of choice, although I am hopeful that certain refinements and added features will be integrated in the next release to truly make Telix shine.

If you are using Telix, remember that it is not free software. Please register your copy of Telix (\$25) as explained in the Telix documentation.

Editor's Note: Mr. Applegate is the system operator of a local BBS titled ENTERTAINMENT LINE at (303)969-9510. Entertainment Line features reviews of movies, videos, and music, and provides a good example of a board devoted to specific non-technical interests. Telix version 2.12 is available locally for download from CONTROL POINT FIDO at (303)526-9642. Ptel offers a support BBS titled THE ASCII EXCHANGE at (416)662-8254 where the latest version is always available. The program can also be ordered on disk for \$10 from: Ptel, 276 Guildwood Parkway, Toronto, Ontario M1E 1P9.

UTILITIES

ARCHIVE UPDATE: Many readers new to electronic bulletin board systems may have wondered about the .ARC file extension appended to so many files stored on BBS. If you download these files and try to run them, nothing happens. The file appears useless.

Actually, the ARC extension

indicates the file has been ARCHIVED using one of several popular data compression utilities. These utilities combine multiple files into one ARCHIVE file and compress the data often to less than half its original size. The resulting smaller file size allows more efficient use of disk real estate and much faster modem file transfers. Because of this, ARCHIVE utilities have become extremely popular with BBS system operators and savvy telecomputing enthusiasts.

To use a file with a .ARC extension, you must extract the various files stored in the archive using one of the utility programs. The file JOE.ARC might consist of four text files and two executable .EXE files all created by "Joe" and archived into the file JOE.ARC for storage purposes.

Although predated by a number of squeeze and library utility programs that performed data compression, ARC.COM was the earliest full-featured archival utility of the type currently popular. System Enhancement Associates, Inc. (SEA) introduced this program. The current version is ARC520.COM released January 8, 1987. We mentioned this utility in the April issue of Denver PC Boardwatch.

Vernon Buerg and Wayne Chin developed some similar utilities fully compatible with the "standard" archival form established by SEA, Inc. Their ARCA.COM, ARCE.COM, and ARCV.COM simulated the ARC520.COM add, extract, and verbose commands respectively to allow users to add or extract files from an archive, or using the verbose command, to view archived files. The Buerg utilities were quite a bit faster as well.

ARC PERFORMANCE COMPARISON

<u>PROGRAM</u>	<u>ARCHIVE SIZE</u>	<u>REDUCTION</u>	<u>CREATE</u>	<u>EXTRACT</u>
PKX34A20.COM	67130 bytes	56.00%	43 sec	26 sec
ARCA/ARCE.COM	67947 bytes	55.47%	53 sec	32 sec
ARC520.COM	67282 bytes	55.90%	221 sec	108 sec

<u>PROGRAM</u>	<u>AUTHOR</u>	<u>ADDRESS</u>	<u>SUPPORT BBS</u>
PKX34A20.COM	Phil Katz/ PKWare Inc.	7032 Ardara Avenue Glendale, WI 53209	EXEC PC BBS (414)964-5160
ARCA/ARCE.COM	Vernon D. Buerg Wayne Chin	none listed	RBBS (415)994-2944
ARC520.COM	System Enhancement Associates Inc.	21 New Street Wayne, NJ 07470	SEAbord BBS (201)694-3348

Recently, Phil Katz has thrown the archive utility world upside down with his utility package PKX34A20.COM. Why the fuss? It seems the PKX utilities have introduced the question of archive compatibility.

File compression requirements vary depending on the type of file to be compressed (text, binary, etc.). ARC programs typically analyze the file and select one of several file compression techniques to compress the file. In some cases, the file is added to the archive without compression. SEA has been careful to make each new release of its ARC.EXE capable of unarc'ing files compressed with previous versions of the program. PKWARE Inc has added a new type of compression algorithm called Enhanced Ziv-Lempel-Welch Squashing. ARC520.COM and the ARCE.COM utility cannot extract files squashed with the new algorithm. The result is that PK can unarc files compressed with ARC.EXE or Vernon Buergs utilities. Unfortunately, files compressed with PKX34A20.COM usually require PKX34A20.COM to

unarc them.

This incompatibility would normally consign PKX to the void of "almost successful" software. But to complicate things further, the PKX utilities are by any test superior to all others. They operate faster, compress data more efficiently, and allow additional features such as comment lines you may add to the archive to describe each file. When the archive is viewed using the usual Verbose command, these comments are visible, making the verbose command more useful and informative.

How do the various utilities actually compare in terms of speed and efficiency. To find out, we benchmarked the Buerg ARCA.COM and ARCE.COM utilities, SEA, Inc.'s ARC.EXE, and PKWare Inc.'s PKARC and PKXARC. We archived and extracted thirteen files totaling 152,576 bytes. All operations were performed on an IBM PC XT compatible clone running at 4.77 MHz. The archiving process was performed from a RAMdisk to reduce the effects of disk access time and the use of various TEMP variables

on the results. The results are shown in the accompanying table.

Note that data compression of the three programs rendered files almost identical in size. Approximately 56% of the original 152,576 bytes were eliminated leaving an archive 44% of the original file size. PKX34A20.COM produced the smallest archive at 67,130 bytes. However, this was only 152 bytes smaller than the ARC520.COM archive and 817 bytes smaller than ARCA.COM produced.

Speed was where the three contenders came to a parting of the ways. ARC520.COM required a cobweb-forming 221 historic seconds to archive the 13 files. ARCA.COM performed the same task in only 53 seconds with PKX34A20.COM coming in clearly the fastest at 43 seconds.

In extracting the same thirteen files from the original archive, a similar tale unfolded. ARC520.COM again required a geriatric 108 seconds to unarc its files while ARCE.COM performed the same task in just 32 seconds. Again, PKX34A20.COM set the trophy pace at 26 seconds - less than 1/4 the time required by ARC520.COM and at least 20% faster than ARCE.COM.

Given these fairly dramatic differences in operating speed, our recommendation is to use PKX34A20.COM for all your archiving and let everyone else worry about compatibility. Apparently, they will have plenty of time to do so. In any event, PKXA20.COM can unarc any files archived by any of the three programs - and it can do it fairly quickly.

DOSAMATIC: DOSamatic version 2.03 is a utility program operating as a combination DOS shell, such as Norton Commander, and switcher program, similar to Soft Logic's Software Carousel. It allows users to appear to run two different application programs

simultaneously. Actually, switchers don't allow true multitasking. One program runs while the other is held in suspension. The user can switch back and forth between the two programs freely - hence the term switcher.

DOSamatic is a shareware product written by Steve Mykytyn. The program comes as DOSAMATC.ARC which can be unarced easily using the PKXARC program. This results in the program file and documentation.

To start the program, enter DOSAMATC. The usual shareware screen appears with the obligatory threats and oaths concerning those who use shareware but don't register etc., etc., ad nauseum. With any key a very nice DOS shell screen appears reminiscent of Norton Commander's screen. Numerous small panels at the top inform you of the date, time, current disk drive and path, available memory and disk space, etc. Three main "select panels are provided to specify drive, directory, and file. The left and right cursor keys allow travel between the three panels while the up and down cursor keys allow selection of items displayed within a panel. Pull-down menus present various options available. This allows a very comfortable "point and shoot" feeling while you easily maneuver through your entire disk tree.

The program allows you to execute up to seven programs from this screen. DOSamatic lists the amount of ram available and asks how much to allocate to the selected application. The application is then run normally.

If you press the ALT-F10 combination, your current application program is instantly "suspended" and the DOSamatic screen once again is in view. You may select a second application and run it much as you did the

first and switch freely and instantly between the new program, the first program, and DOSamatic by pressing the ALT-F10 key. In this way up to seven applications may be activated one at a time using DOSamatic with all of them then instantly on call.

The allure of this is irresistible. There are a couple of limitations to this type of program however. For one thing, it does nothing to relieve the 640K ram barrier. My R:base System V program requires a little over 400 Kbytes to run while Multimate Advantage hefts in at just over 300 Kbytes. In light of this, the advantage of having a seven program limit is mute.

Further, these type of programs are unable to control the endless variety and nuance of the application programs available. I switched out of Multimate to the DOS shell screen and selected a new drive and directory to run another small application. When I switched back to Multimate using ALT-F10, the default directory remained. Multimate holds one page of text at a time in memory, and its a bit touchy about missing file directories.

DOSamatic is an interesting and in some ways fun utility that does have application where you need to switch among several small programs quickly. However, with the growing memory requirements of today's software, it doesn't quite live up to its claims. Try it anyway. It will make you appreciate IBM's OS2 operating system when it arrives Real Soon Now. Marin Pacific Software, 1001 Bridgeway, Suite 514, Sausalito, CA 94965.

EDITOR'S NOTES

This issue marks the first time we pass the magic milestone of 200 electronic bulletin board systems

and services in our list of Denver area BBS. We present 202 such confirmed numbers for your perusal, inspection, and use.

Our reception as a newsletter has been good. All comments received were complimentary. The percentage of subscribed response to our direct mailings has been far above expected and our continued publication is assured.

Ironically, the electronic response was disappointing. Although we placed the entire text of the March issue on several BBS and an outline of the April issue on a number of others, not a single subscription was received via this channel. We presumed someone would download it, printout the subscription form and send it in. According to a number of sysops, several hundred users did perform the download part of the equation. Yet all forms received were copies from the mailed edition. And there is someone out there with a three hole punch that should be on our staff - judging by the number of Xeroxed copies of the same hole-punched form we received. It would appear that users respond well to receiving a printed version and not at all to receiving an electronic one. This may be a tribute to the quality of our Epson printhead, or a tribute to our graphic design. Both possibilities are not only suspect...but bizarre.

In any event, our natural response is to step up direct mail, and de-emphasize the electronic upload. This is ironic considering the subject of the publication. But the letter is both for you and about you. And to a very large degree, you call the tune - we just play the piano. Happy telecomputing.

Jack Rickard
Editor Denver PC Boardwatch

DENVER PC BOARDWATCH LOCAL BBS LIST - CONFIRMED UP

BOARD	TELEPHONE	BAUD	HRS	DESCRIPTION	SYSTEM
Aces High	329-6579	3	24	Programming/general messages	Franklin
Alpha BBS/ Intercomex	367-1935	3/12/24	24	Tandy/Ham radio/Space topics	TRS
Annet	1-223-1297	3/12	24	Commodore/Amiga/C language	IBM
Apparat Inc.	798-7947	3/12/24	24	IBM Fido board	IBM
Apple Pi Board	422-3716	3/12	24	Apple user group messages/downloads	Apple
Atlantis	973-8369	3/12	24	Apple, MAC, Message	Apple
Aurora Net	688-9292	3/12/24	24	Protree Prime/Elite Support Board	Apple
Aurora Public Shools Network	693-6737	3/12	24	Stock market simulation/ APSNET	Apple
Aurthur's Den	688-1724	3	-8-	Commodore	Commodore
Backstage BBS	698-2818	3/12/24	24	-8-	-8-
Baha'i Board	449-3386	3/12	24	Religious/philosophy/Baha'i faith	IBM
Bank, The	771-7531	3/12	24	Not accepting new accounts	Apple
Blue Planet	979-7299	300	24	Space Wars Game	Tandy2000
Boulder Fido 184/77	497-6968	3/12/24	24	Messages and downloads	IBM
Boulder MAC Maniacs	666-7543	3/12	24	MAC Messages	Apple II
Box's Cabin, The	424-9185	3/12	24	Apple/Technical Notes	Apple
Buck Board, The	427-9539	3/12	24	Veterans messages, TRS-80, Amiga	TRS
Bud's BBS	761-6887	3/12	24	Atari - 3.123 Megs - News items	Atari
C.A.R.L. Boulder/Broomfield	444-2857	3/12	24	Library Research	Tandem
C.A.R.L. Colorado Springs	1-632-2194	3/12	24	Penrose Library	-8-
C.A.R.L. Denver	838-1548	3/12	24	Colorado Alliance of Research Libraries	Mainframe
C.A.R.L. Denver	838-1547	3/12	24	Colorado Alliance of Research Libraries	Mainframe
C.A.R.L. Denver	838-8519	24	24	Colorado Alliance of Research Libraries	Mainframe
C.A.R.L. Denver	838-1165	3	24	Colorado Alliance of Research Libraries	Mainframe
C.A.R.L. Denver	838-1546	3/12	24	Colorado Alliance of Research Libraries	Mainframe
Cable Net Opus	595-8883	3/12	24	New Board!	IBM
Career Connection/DRUG	671-8881	300-9688	7p-7a	Job list/Resume/Denver Rainbow Users Grp	DEC100
Castle Dark Horn	741-5278	-8-	-8-	-8-	-8-
Catspaw SNOBOL4/ICON	1-539-4838	3/12/24	24	SNOBOL/ICON programming languages	IBM
Chariot	1-632-3391	3/12	24	Unix/Conferences/NAPLPS graphics	-8-
Cherry Hills Village Post BBS	762-1981	3	-8-	-8-	-8-
Cheyenne Wells Shool District	1-767-5533	3/12	3p-8a	High School BBS	-8-
Chip's Xboy AE TAC	693-2452	3	24	Apple with ASCII express only	Apple
Christian Protocol	745-1584	3/12/24	24	Christian messages/bible text	Epson
Club House, The	756-9134	3/12	24	RP Games/golf format/messages	Apple
Coco County Airport	343-6787	3/12	24	TRS Color computer support	CoCo
Colorado Commodore Club BBS	452-8544	3/12	24	Commodore Info	C-64
Colorado Fire Net	1 591 7415	3/12	-8-	Colorado Springs	-8-
Colorado Sno-Bank	671-7669	3/12/24	24	Ski conditions,roads,winter rec info	IBM
Colorado University	447-2548	3/12	24	University mainframes (require access)	Mainframe
Down-net Information Service	366-3898	3/12	24	* service jokes/weather/sports/database *	C-64
Down-Net Information Service	348-2473	3/12	24	* These four lines all access the same *	C-64
Down-Net Information Service	366-7177	3/12	24	* C-64/C-128/Amiga Info-dnlds-messages *	C-64
Down-Net Information Service	366-2341	3/12	24	* excellent info for Commodore products*	C-64
Down-Post	534-4646	3/12	24	SIGS/Jokes/Messages	-8-
Communications Station	232-2828	3/12	24	Online RP, helpful bulletins, wantads	C-64
Compulatch Club	467-3832	3	8a-5p	Adults only	-8-
Computer Farn	1-632-8669	3/12/24	24	IBM Hardware/Software sales	IBM
Computer Repeats Inc.	939-8174	3	24	Used Atari equipaent sales	Atari
Computers Unlimited	762-9122	3/12	24	Sanyo MBC-55X Support	Sanyo
Computerworks	665-8789	3/12	24	Macintosh/IBM PC Info exchange	MAC
Conral Point Fido 184/711	526-9642	3/12/24	24	*Excellent* PC Software for download	IBM
Conral Systems II	841-6865	3/12/24	24	63M Downloads/Boardwatch/Comm Software	IBM
Conral Systems Premier	458-6248	12/24	24	IBM/Compatibles subscription board	IBM
Controller Board/TBBS Island	698-9423	3/12	24	Computer supplies	TRS

DENVER PC BOARDWATCH LOCAL BBS LIST - CONFIRMED UP

BOARD	TELEPHONE	BAUD	HRS	DESCRIPTION	SYSTEM
COSUG	1-531-9674	3	-0-	Colorado Springs Fidonet	-0-
CP/M SIG INC Fido 104/372	465-1313	3/12	24	Oldest user's group in area CP/M - IBM	IBM
CPU Board	1-772-7229	3/12	24	Downloads and useful BBS info	TRS
Crossroads	989-8397	3/12	24	Discussion	TRS
CS BBS Service I	1-531-6668	3/12	24	Subscriber access Fido 120/11 Zenith	IBM
Data Bank	494-0167	3/12/24	24	IBM Messages - good utilities	IBM
Day's End Fido 104/20	650-5636	3/12/24	24	Downloads, Messages, Astronomy	IBM
Dead Zone	1-468-8869	3/12/24	24	Let ring twice/call back in 20-45 second	IBM
Deathstar	286-8930	3/12	8p-6a	Fun posting	C-64
Dementia	989-8470	3/12	24	American MENSA Denver Chapter BBS	Apple
Den HUG	331-0982	3/12	24	Denver Heath/Zenith User Group	Heath
Denver Dating Board	343-1579	3/12	5p-7a	Audio Visual production, personal ads	C-128
Denver Deaf Net	989 9245	3/12	24	Hearing impaired / computing	Apple
Denver Metroplex Fido 104/69	455-3283	3/12/24	24	Autocad/computer/sexual boards	Kaypro
Denver Tech Center BBS	799-4813	300-9600	24	Megafiles of downloads/on line chess	IBM
Dialamatch 118/The Brokerage	796-9721	3	24	Adult matchmaking	Franklin
Dinosaur Board	1-652-3595	3/12	24	Specializing in outdated computers	TRS
Discovery, The	388-5437	3	24	Music/General	Apple
DJ-Galactic Conquest	789-0500	300-9600	24-	Galactic Conquest game on-line	Apple
Dragon's Shadow	841-3721	3	24	Fantasy	-0-
Eagles Nest Fido 120/10	1-598-8413	3/12	24	Eagleview Middle School	IBM
Education 2000 Fido 104/29	499-6320	3/12	24	Education issues K-12	-0-
Electric Land ST	449-3227	3	24	Atari Sales and Service	Atari ST
Electronic Locksmith RCP/M	698-1623	3/12/24	24	50M downloads (CP/M & MS-DOS)	CP/M
Englewood Police Dept. BBS	988 1459	3/12	24	Law Enforcement	-0-
Enterprise	980-1304	3/12	24	20 boards/10 dwnld sections/games/trivia	Apple
Entertainment Line	969-9510	3	24	Movie, video, music reviews/ranking	CoCo
ETA Denver Fido 104/32	750-5042	3/12	24	ANSI, messages wx forecast downloads	Tandy
Eusebeia Fido 104/10	430-8376	3/12/24	24	Christian BBS - Full KJV Bible downloads	IBM
Excelcier	697-1244	3/12	24	Apple/Commodore message areas	Apple
Experience Software	798-0792	3	24	Franklin Messages	Franklin
Fantasy Mountain	278-8369	3/12	24	Art/Downloads	CP/M
Farm, The	449-1920	3/12	24	Apple II Messages	Apple
Fiddler's Fido 104/606	674-1859	3/12/24	24	IBM Equestrian	IBM
Fido NBS 104/607	497-3934	3/12/24	24	National Bureau Standards - Jobs SIG	IBM
Fishery, The	756-3813	3/12	24	Atari/Macintosh	Atari
F06-45	1-471-2415	3/12	24	Colorado Springs Osborne Group	Osborne
Fuzzy's A.E.	297-0828	3	24	Commodore interests	C-64
Galafrea	987-0161	3/12	24	C-64 downloads/messages	C-64
Generic Computer Services	449-32227	3/12	24	Atari and other computer repair service	Atari
Genesis Project	287-8267	3/12	24	Apple II General	Apple
Glider's Hangar	650-1389	3/12	3p-12a	Commodore - airport theme	C-128
GLOBAL Information	286-7914	3/12	24	Fee Subscription/Software database	-0-
Greenline	469-2053	3/12	10p-6a	Amiga	Amiga
Greeter Hub	1-473-3837	3/12	24	Discussions	IBM
Grizzly King	666-0824	3/12	24	Freeware/Colorado Outdoors/Programmers	IBM
Grotto, The	694-9050	3/12/24	24	Amiga, Pascal	IBM
Hack Shack	688-8406	3/12	24	Commodore	C-64
Hangeans Moose	499 4818	3/12	24	Commodore games	C-64
Hard Rock Cafe Fido 104/25	287-1508	3/12	3p-2a	RBBS information	IBM
HIP Shack	1-593-0766	3/12	24	Southern CO Fido 120/19 HAM/SWL	IBM
Hollows, The	428-0372	3/12	24	Apple II Messages	Apple II
Insight	573-2071	3/12	5p-7a	Downloads, on-line games	-0-
JeffCo Schools BBS	973-2540	3	24	Apple II education	Apple
King's Market Bookshop	665-6091	3/12	24	Books, writers, Timex SIG, Zork	TRS

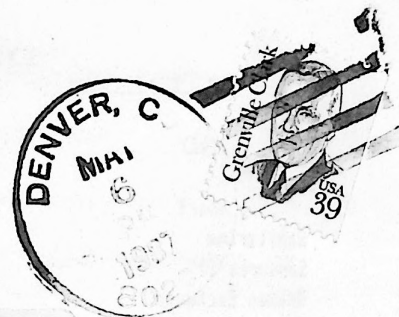
DENVER PC BOARDWATCH LOCAL BBS LIST - CONFIRMED UP

BOARD	TELEPHONE	BAUD	HRS	DESCRIPTION	SYSTEM
Kings Bench Fido 184/615	377-6725	3/12	24	Tandy 1000 only/\$2 reg fee/messages	TANDY1000
Laboratory, The	289-2549	3/12	-0-	Private BBS	-0-
Lakewood Department of Safety	987-7388	3/12	24	Police sponsored - law enforcement msgs	IBM
Lakewood RCPM/RBBS	985-1108	3/12	24	CP/M MS DOS Downloads	CP/M
Land of Lindon	987-2894	3/12	24	Fantasy Runequest games	Apple
LES-COM-NET	233-5824	3/12	24	Lesley College Communications Network	Apple
Libyan Embassy	688 1127	3/12	24	Atari games	Atari
Loading Zone, The	421-3830	300	24	Latest mods-neat subboards-games	C-64
Locksmiths' Annex	698-1623	3/12/24	24	50M downloads (CP/M & MS-DOS)	CP/M
M.A.E. Board	1-564-8618	3/12	24	Mountain Amiga Enthusiasts	Amiga
Magic	791-8732	3/12	24	Macintosh/Apple GS	MAC
Manville Information Services	978-3946	3/12	24	Business Software/Macintosh	IBM
mbkSYS! Fido 184/22	443-9155	3/12	24	Writers tools/Science Fiction	IBM
Metro Computer Exchange	753-6677	3/12	24	IBM - C64 messages and downloads	IBM
Metro Data Exchange	838-2445	3	24	Commodore 64 - Grateful Dead Schedule	C-64
Micro-1040	289-2861	3	24	Private BBS for software support	TRS
Microlink B Fido 184/188	972-4181	3/12/24	24	Fido board -good downloads	IBM
Mile Hi Foren	431-1484	3/12	24	Atari support	Atari
Mile Hi Tech Fidonet 184/56	973-9338	3/12/24	24	Fido area coordinator - Fido news/list	IBM
Mile High CUSSNet Fido 184/614	698-9924	3/12	24	CUSS Computer Use in Social Services	IBM
Mile High Epson User Group BBS	752-2943	3/12/24	24	MHEUG Club Board	EPSON
Mile High Net	671-7388	3/12/24	24	Fido board	IBM
Mile High Software Exchange	738-2250	3/12	24	Amiga/Apple downloads - messages	Apple
Mile High Turbo Fido 184/24	423-3114	3/12	24	Turbo Pascal/Denver PC Boardwatch	IBM
Minds of Mines (MOM) BBS	273-3989	3/12/24	24	CSM Artificial Intelligence/Geotechnical	TI
Musician's Den Fido 184/17	321-6857	3/12	7p-9a	Music interests -24 hours on Sunday	Compaq
My Fido 184/19	795-1215	3/12	24	Messages/downloads for gays	IBM
Mycroft	777-8898	-0-	-0-	No info	-0-
National Park Svc Fido 184/688	236-9868	3/12	24	Operations Engineering WASO 610	IBM
Networks Unlimited	348-8368	3/12/24	24	Messages/downloads/polls	IBM
Networks Unlimited	296-3210	3/12/24	24	Messages/downloads/polls	IBM
Night Shift, The	322-1544	3/12	24	Casino, football	Apple II
Nightline Fido 184/31	659-1897	3/12	9p-3a	General Fido messages/IBM game files	IBM
Odyssey III	691-8169	3/12	5p-8a	Adult/sex oriented - members only - 18yr	Apple
Old West	393-7519	3/12	24	BBS list, RP games,high score list,msg	C-128
One on One	423-7124	3/12	24	Dating/Personals	-0-
Optotech Inc	1-578-7973	12	24	400 Meg Optical Disk Drive	IBM
PACE	428-3696	3/12	24	Practical Apologetics/Christian Evangel.	-0-
PC Computer Brokers	452-9567	3/12	24	IBM,Epson Equity,TRS-80 Club Msgs	IBM
PLjr Net Fido 184/984	789-4610	3/12/24	24	IBM PC Jr./ Space Exploration	IBM
Pencils	477-9548	3	24	Business/office supplies	Atari
Phone Connection	426-7969	3/12	nights	Commodore	C-64
Photo Tech BBS	781-1879	3/12	24	TRS 80/ HAM/Video/camera	TRS
Pinecliffe Fido 184/28	444-7873	3/12/24	24	125 Meg - Online Order for CDB Systems	IBM
Probe Blaster	422 3759	3/12	24	Apple IIc	Apple
PSNet	985-2634	3/12	24	Parapsychology/Near Death Exper./Bibliog	TRS
Ramnet	1 598 7667	-0-	-0-	Rampart High School	-0-
Reggae Land	698-8144	3	180-6a	Commodore	C-64
Regimental Headquarters	375-9556	3/12	24	Commodore - military theme	C-128
Retreat, The	369-7852	3/12	24	Christian Gospel/Prayer	Apple
Revelstone	722-5886	3	5p-2a	No info	-0-
Roc Haven	789-3238	3/12	180-6a	Atari/Commodore	Atari
Rocky Mountain 99ers	286-3692	-0-	-0-	RM99ers Club Board Texas Instruments 99	-0-
Rocky Mountain RESS	758-2187	-0-	-0-	No info	-0-
Ron and Shannons AMIS	978-8298	3/12	24	Atari support 5.4 Megs	Atari

DENVER PC BOARDWATCH LOCAL BBS LIST - CONFIRMED UP

BOARD	TELEPHONE	BAUD	HRS	DESCRIPTION	SYSTEM
Running Board	252-4051	3/12	24	Transportation/Atari	Atari
Sanitarium	750-0563	-0-	-0-	Commodore	-0-
Sensoria II	762-0669	3	24	Apple II RP Games	Apple
Shaman Exchange	969-8585	-0-	-0-	Multiline system	Apple
Sheridan & Associates	935-1489	3/12	24	Buy/sell/trade - chess history	Apple
Skyline Computers	457-0320	3	24	Atari Messages	Atari
Solid Software Fido 128/15	1-591-4273	3/12/24	24-	Zenith 50 Meg	IBM
Sort Support	699-8222	-0-	-0-	No info	-0-
Space Network	494-8446	3/12/24	24	Space Exploration Information	IBM
Spam Mania	423-0348	-0-	-0-	No info	-0-
Stampede	799-9733	3/12/24	6p-10a	Atari/Amiga messages/downloads	Atari
Stargate 15	755-6468	3	24	Commodore - Star Command Newsletter	C64
T-Zone	427-7114	3/12	24	Apple II	Apple
TAC Headquarters	322-8337	3	24	Commodore	C-64
Taj Mahal	451-7222	3/12/24	24	20 Mbytes Apple	Apple
TBBS#1 of Denver	792-2032	3/12	24	Apparat computer BBS	-0-
Telenet	337-6000	-0-	-0-	No info	-0-
Teletran 1	371-7645	3/12	24	Commodore online games	C-64
Temple of Doom	771-9523	3	-0-	No info	-0-
The 8th Sea Fido 104/610	252-9235	3/12/24	24	Scuba and rescue messages	IBM
This End Up Fido 104/30	430-1585	3/12	10p-10a	New Board - dBase -utils	IBM
TI Link	499-1022	3/12	24	TI 99/4A Fido 104/444	TI
Toadscape, The	741-5063	12	24	Atari ST messages/downloads	Atari
Top O' the Rockies BBS	1-963-3688	3/12/24	24	Ski Info/Solar/Music tapes/cds	TI
Trekker World	745-9530	3	7a-10p	Apple games/messages	Apple
Unknown TBBS	988-8155	3/12	24	BBS lists, Jokes, Amigas	CP/M
UPAS	665-8506	3	24	Unix Public Access System	-0-
UPAS	665-8505	12	24	Unix Public Access System	-0-
Vault, The	796-0539	-0-	-0-	USAF/ZMAG Member	Atari
Vern's Terminal Exchange	433-1150	3	24	Commodore messages/downloads/ads	C-64
Villa TI	1-574-2567	3/12	24	Front Range 99er Computer Club	TI
Vipertron/ PCP BBS	722-2633	3/12	24	Atari messages, surveys	Atari
Waterton Computer Club	977-7995	3/12/24	5p-7a/we	Martin Marietta Employees 30M dnlds	IBM
Werdna's Lair II	331-9276	3	24	Games	Apple
White Runes of Tinuviel	972-8566	3/12	24	Atari computers/Tolkien subjects	Atari ST
World Peace	320-4822	3/12/24	24	Current events, politics	Heath
ZAP!	367-4103	-0-	-0-	Atari/ST/8 bit	Atari

Denver PC Boardwatch
5970 South Vivian Street
Littleton, CO 80127



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HARDWARE: _____ SOFTWARE: _____